

REQUEST FOR ALTERNATIVE PROPOSAL
LIGHT RAIL/MODERN STREETCAR PROJECT
MIAMI BEACH

SOLICITATION NUMBER: PRD 2016-07-KB



GREATER MIAMI TRAMLINK PARTNERS

ALSTOM



InfraRed
Capital Partners

JACOBS

serco

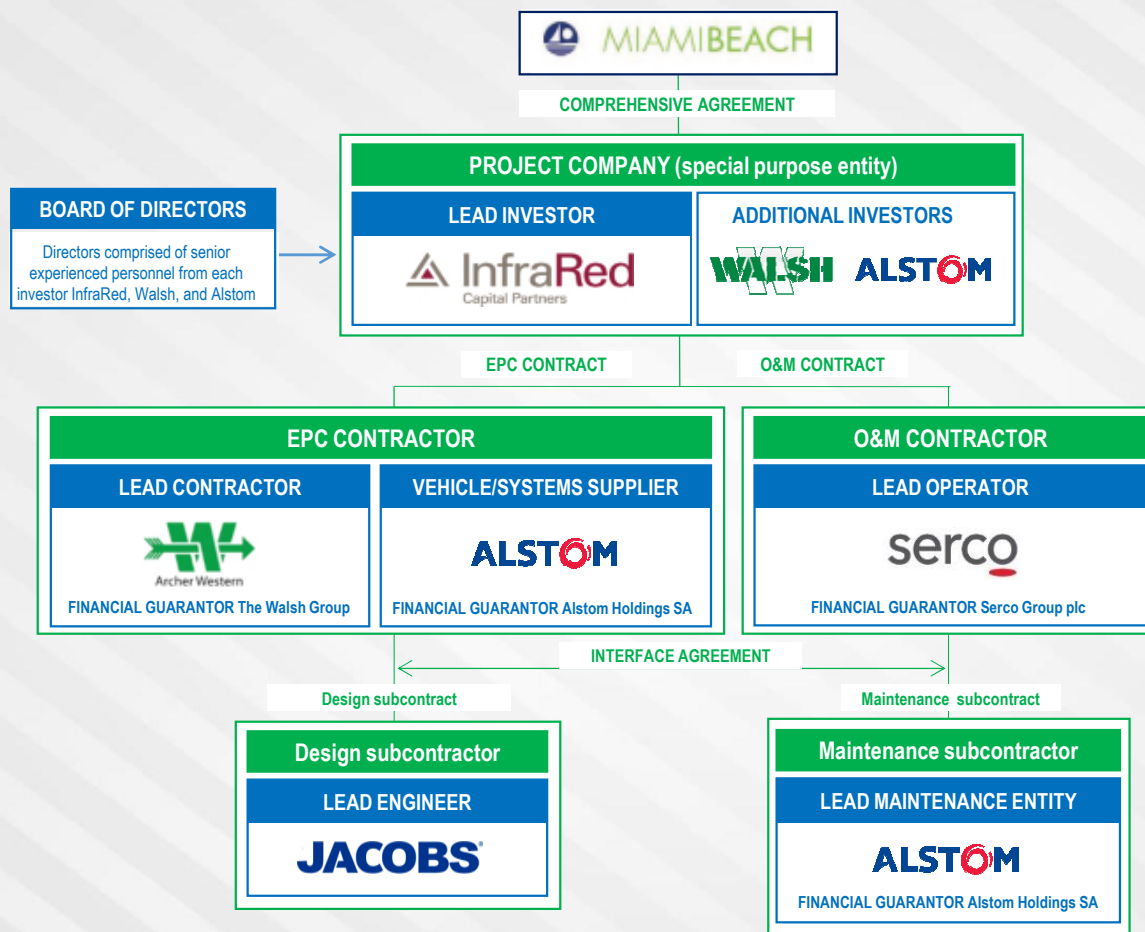
WALSH



THE RIGHT TRACK



**TEAM EXPERIENCE & QUALS
MIAMI BEACH OUTREACH
VALUE PROPOSITION**



KEY: FINANCIAL GUARANTORS LEAD TEAM PARTICIPANT CONTRACTUAL COUNTERPARTY



ONE TEAM
ONE SOLUTION



Miami Beach Trans Master Plan
Passenger Comfort
Aesthetic Sensitivity
Transit & Municipal Identity
Convention Center - Area Attractions

Sea Level Rise and Flooding
Interoperability
GPS Technology
Low Floors / Disabled Accessible
Modern, Innovative Technology

Personal Experience & Team Synergy
Operator-led
P3 Financing Expertise
Rail Systems in Urban Setting
Fully Catenary-less System



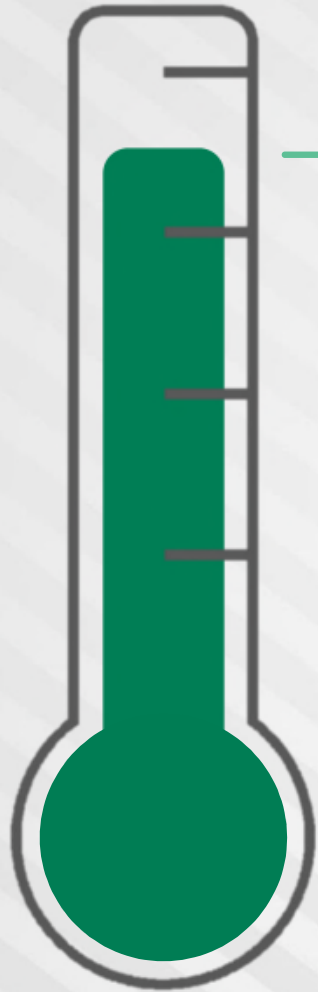
COMMUNITY



TECHNOLOGY



EXPERIENCE



80%

**OF RESIDENTS FAVOR
A STREETCAR IF
COMPLETELY WIRELESS**

DESIGN



**DESIGN APPROACH
ALIGNMENT
RESILIENCE
KEY ELEMENTS**

Oklahoma



Seattle



Ohio

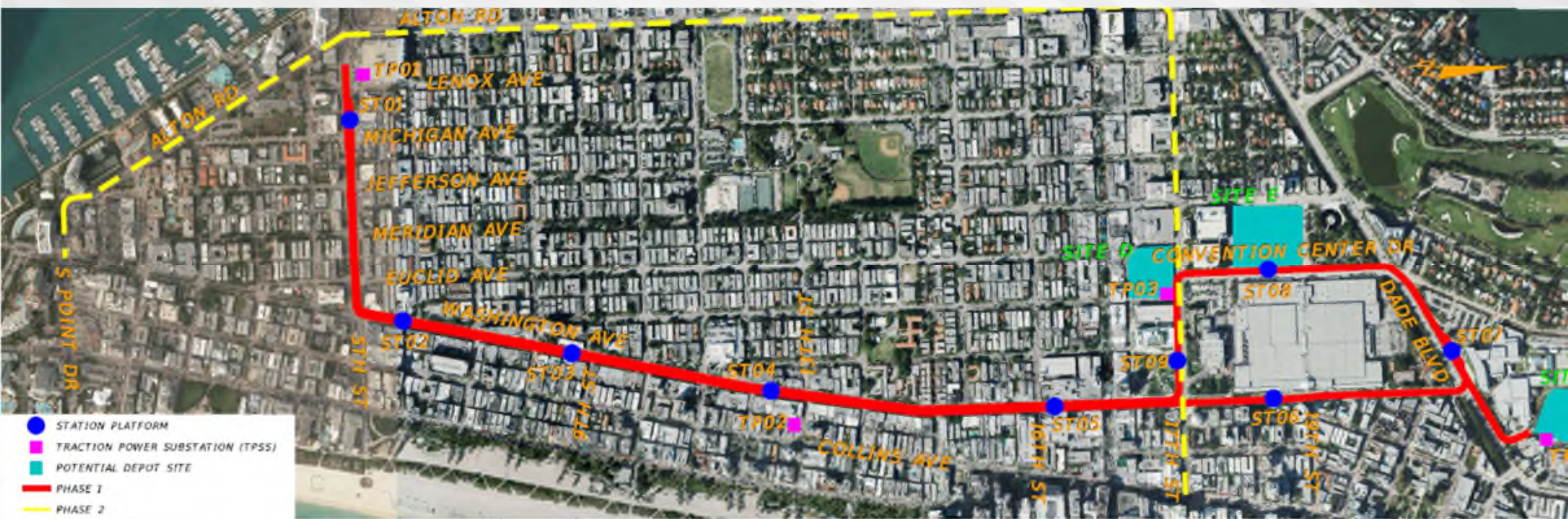


JACOBS



Florida

DESIGN – ALIGNMENT



DESIGN – TYPICAL SECTIONS

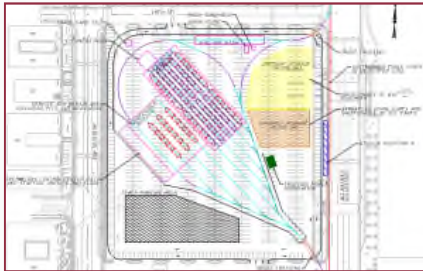


DESIGN – DEPOT LOCATIONS & LAYOUTS

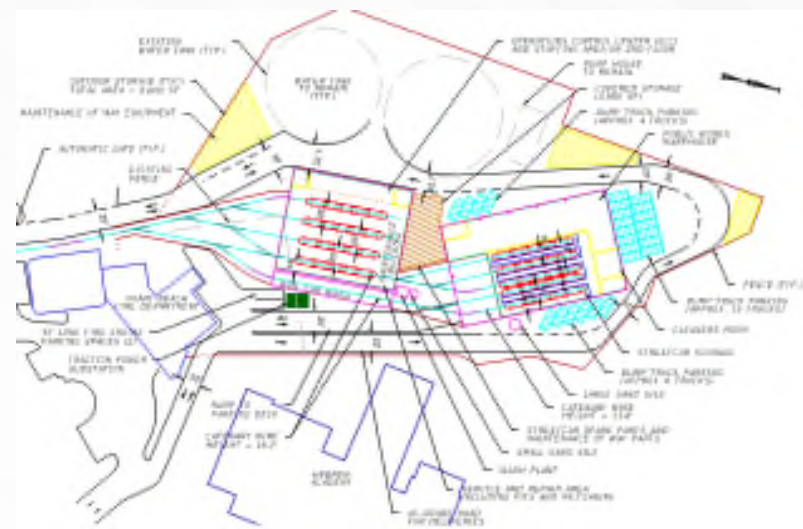
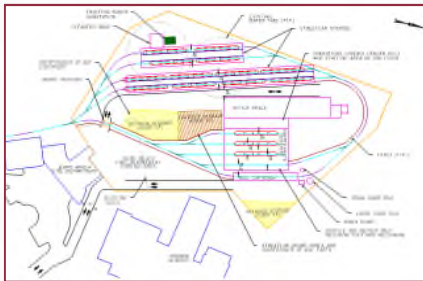
Site D
Option 1



Site E
Option 2



**Site F
Option 3**



Site F
Option 4 (Preferred Choice June 6, 2016)
 Storage space : 9 Streetcars indoor

CONCEPTUAL LAYOUTS TO BE REFINED DURING DESIGN

DESIGN – MAINTENANCE



DUBAI MAINTENANCE BUILDING





DESIGN – RESILIENCY – SLR/FLOODING/DRAINAGE



50-100 Year Flooding Areas

DESIGN – RESILIENCY – SLR/FLOODING/DRAINAGE



2015 JACOBS STUDY



Passenger Stops

Platform stops with Shelter reflecting Miami Beach aesthetics,
Passenger Information Systems - Variable Message Display (Next Train announcement)
Fare Collection



CUSTOMER FOCUSED DESIGN

DUBAI METRO

1/3 reduction in labor to operate, depot consolidation, 99.9% availability

Reduction in system design costs, integrated modes, operating costs

LUSAIL STREETCAR

ABU DHABI METRO & STREETCAR

Significant reduction in design & operating cost, increased performance

Developed OCC, signals, station enhancements, future proofed system

MANCHESTER

TECHNOLOGY



**TECHNOLOGY EXPERTISE
VEHICLE DESIGN & FEATURES
CATENARYLESS SYSTEM**

VEHICLES & TECHNOLOGY



1,800 IN OPERATION

6 BILLION PASSENGERS

2,100 ORDERED

ALSTOM

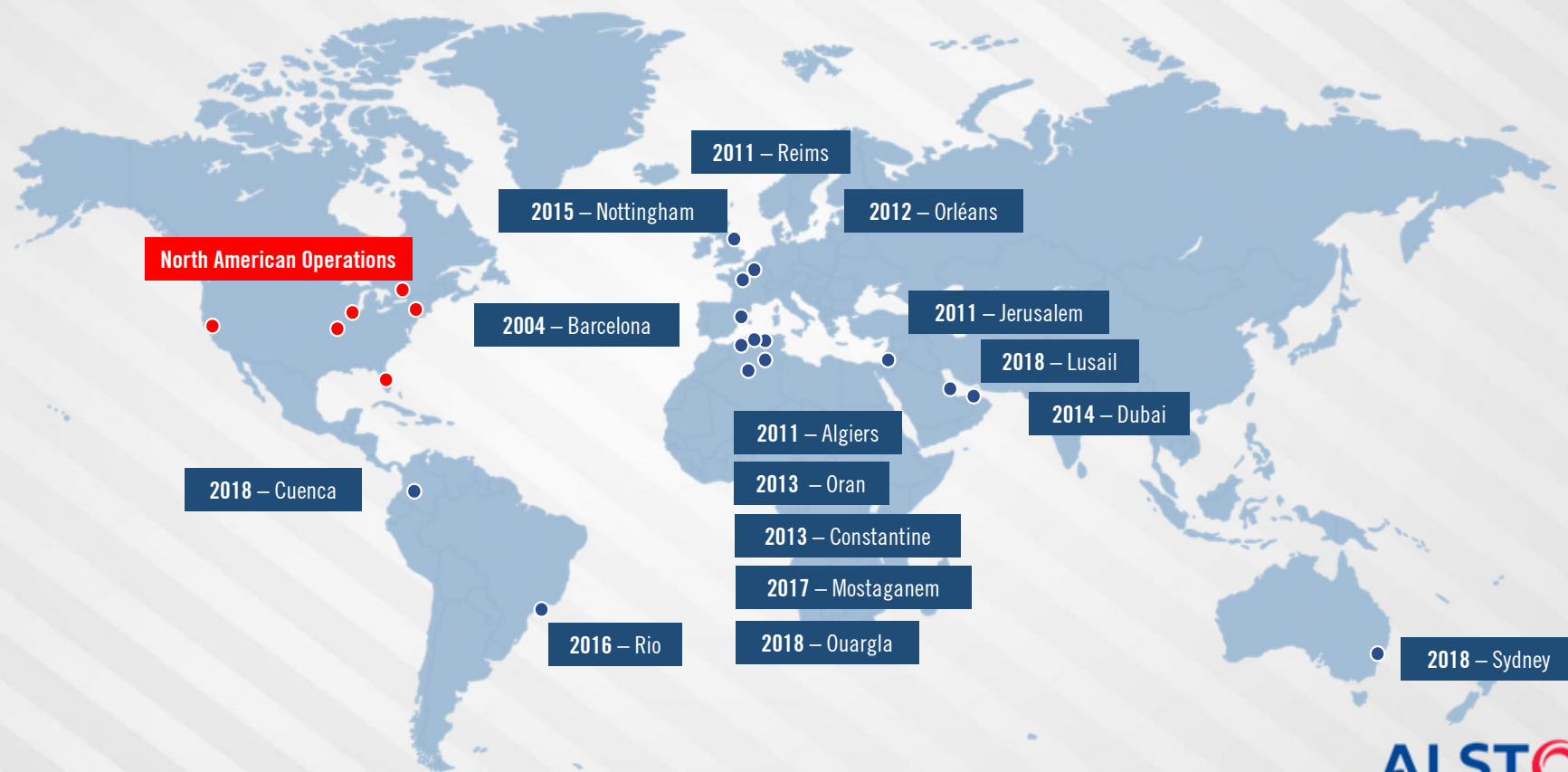
40% GLOBAL PROJECTS

15 YEARS

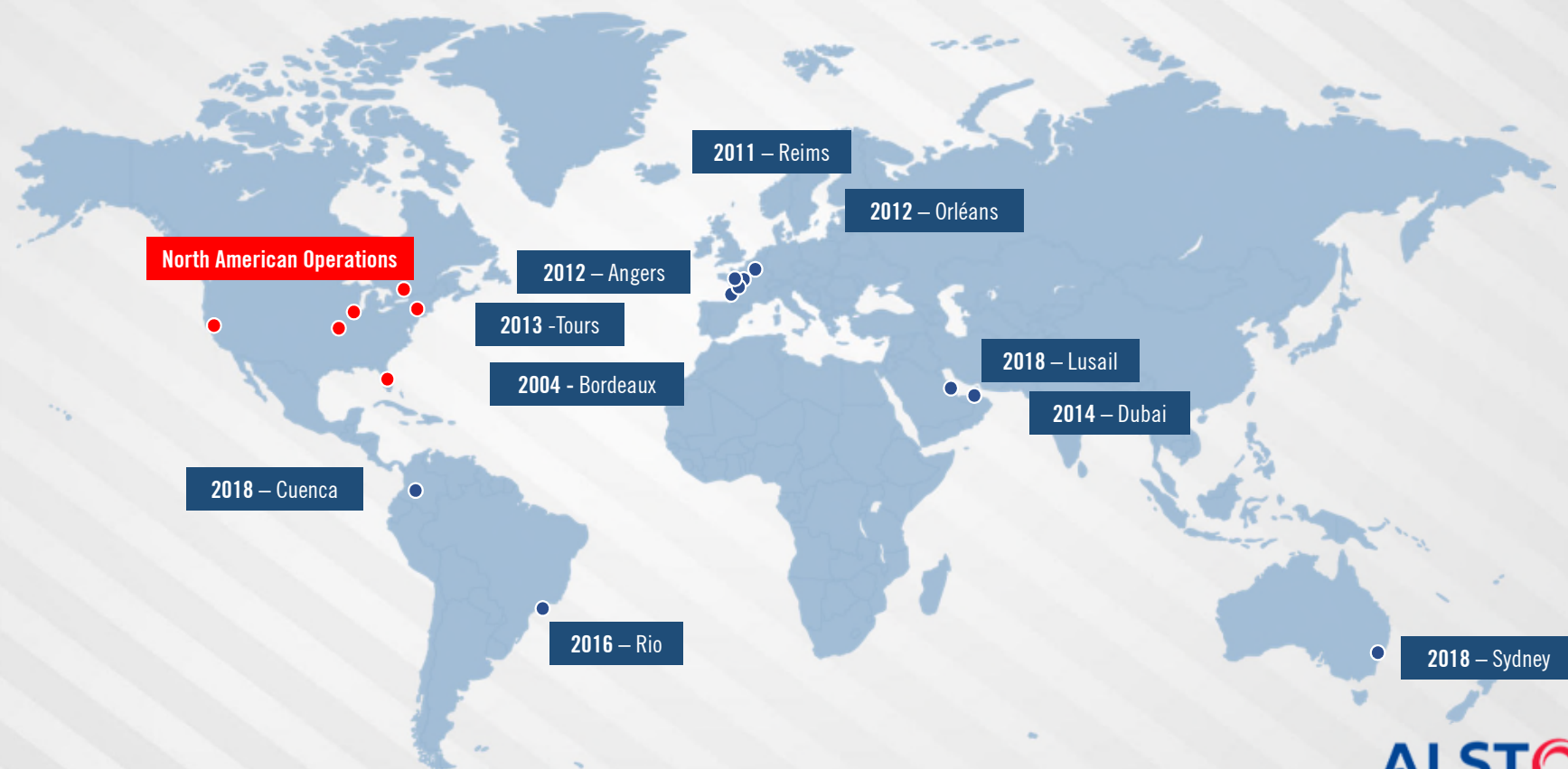
50 CITIES



VEHICLES & TECHNOLOGY – STREETCARS TURNKEYS



VEHICLES & TECHNOLOGY – GROUND POWER SUPPLY CITIES



VEHICLES & TECHNOLOGY – 100% WIRELESS NETWORKS





	GPS	Supercaps	Batteries
100% wireless			
Safety			
Flooding			
Passenger comfort			
Noise pollution			
Sustainability			
Life cycle cost			
Aesthetics			
Interoperability			



	GPS	Supercaps	Batteries
100% wireless			×
Safety			●
Flooding			●
Passenger comfort			×
Noise pollution			●
Sustainability			×
Life cycle cost			×
Aesthetics			×
Interoperability			×



	GPS	Supercaps	Batteries
100% wireless		●	×
Safety		●	●
Flooding		●	●
Passenger comfort		×	×
Noise pollution		×	●
Sustainability		×	×
Life cycle cost		×	×
Aesthetics		×	×
Interoperability		×	×



	GPS	Supercaps	Batteries
100% wireless	●	●	×
Safety	●	●	●
Flooding	●	●	●
Passenger comfort	●	×	×
Noise pollution	●	×	●
Sustainability	●	×	×
Life cycle cost	●	×	×
Aesthetics	●	×	×
Interoperability	●	×	×

A SOLUTION FOR MIAMI BEACH



Safety

Resiliency

Passenger Comfort

Aesthetics

Interoperability

Reliability

BUSINESS AS USUAL



RESILIENCY



CROSS AREA FLOODED UP TO 4 INCHES



READY TO ROLL

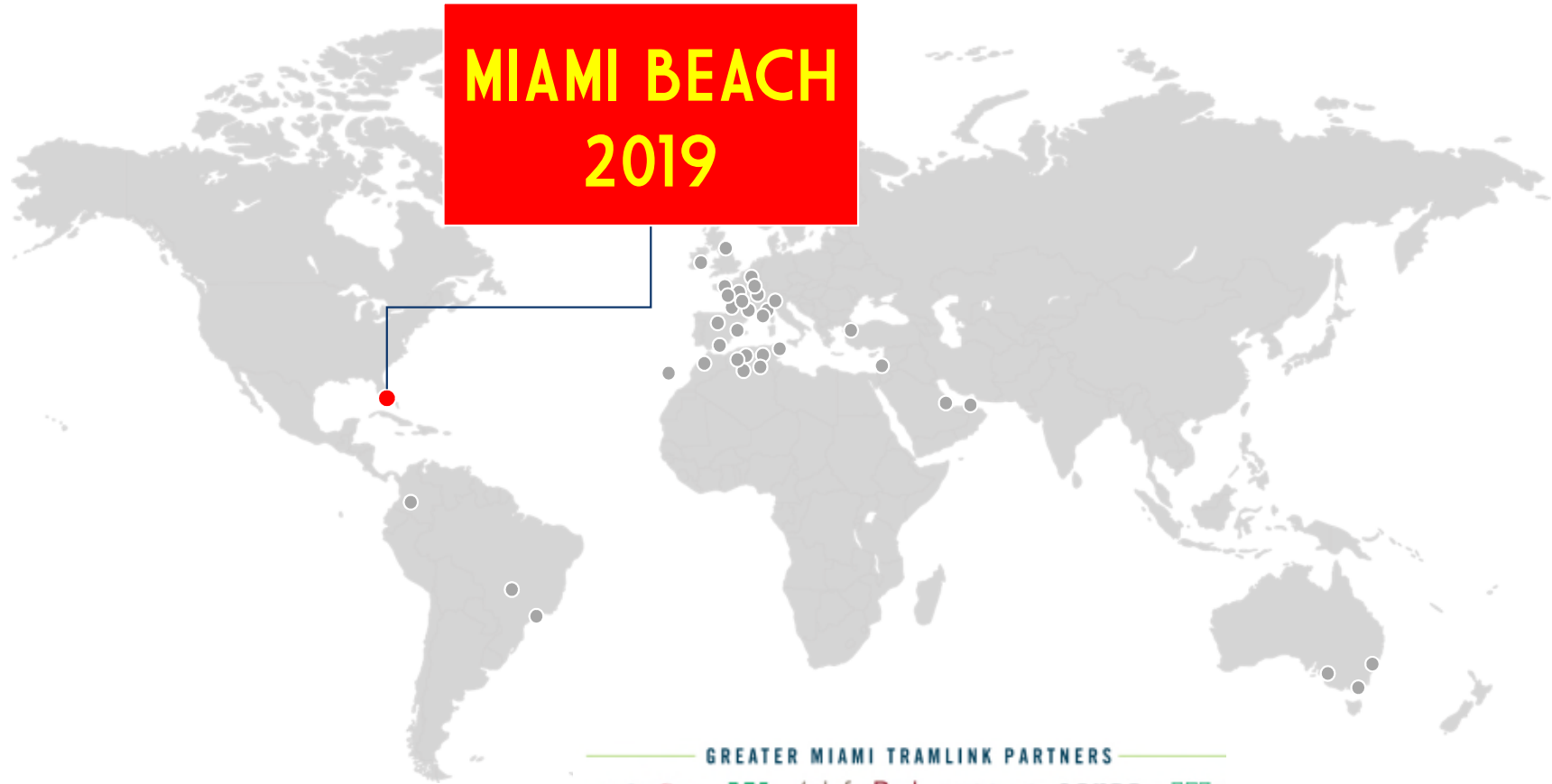


GREATER MIAMI TRAMLINK PARTNERS

ALSTOM   InfraRed JACOBS serco  WALSH

READY TO ROLL

**MIAMI BEACH
2019**



GREATER MIAMI TRAMLINK PARTNERS

ALSTOM



InfraRed
Capital Partners

JACOBS

serco

WALSH

CONSTRUCTION



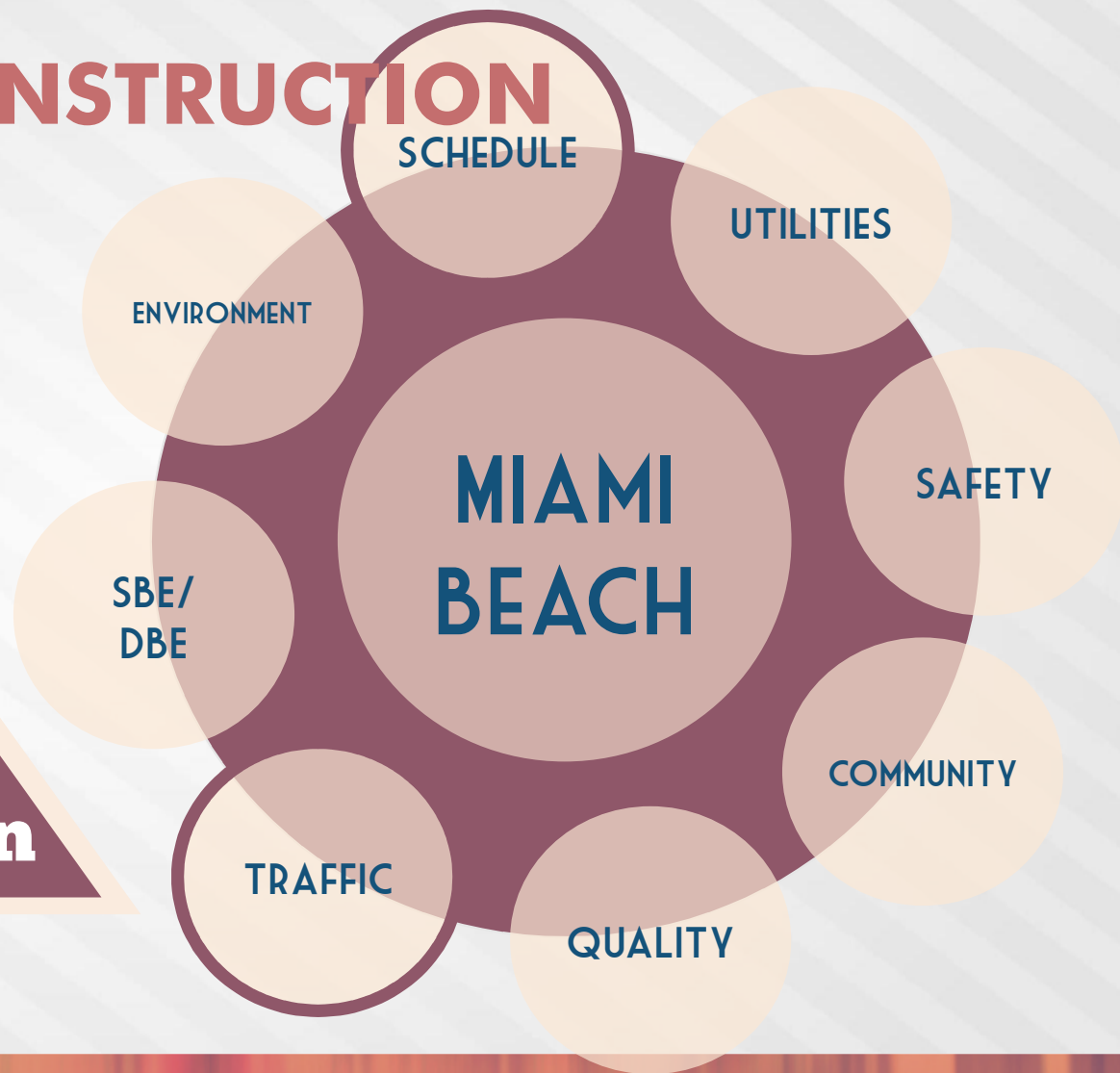
**CONSTRUCTION APPROACH
ACCELERATED SCHEDULE
CONSTRUCTION STAGING**

EXPERIENCE



APPROACH TO CONSTRUCTION

Safe
Efficient
High Quality
Minimal Impact
Clear Communication





TWO YEARS OF OUTREACH

CONSTRUCTION – PROPOSED STAGING & WORK BLOCKS

● Sidewalk Work (40 Days)



1



CONSTRUCTION – PROPOSED WORK BLOCKS



1 ● Sidewalk Work (40 Days) **2** ● Track Work (80 Days)



CONSTRUCTION – PROPOSED WORK BLOCKS



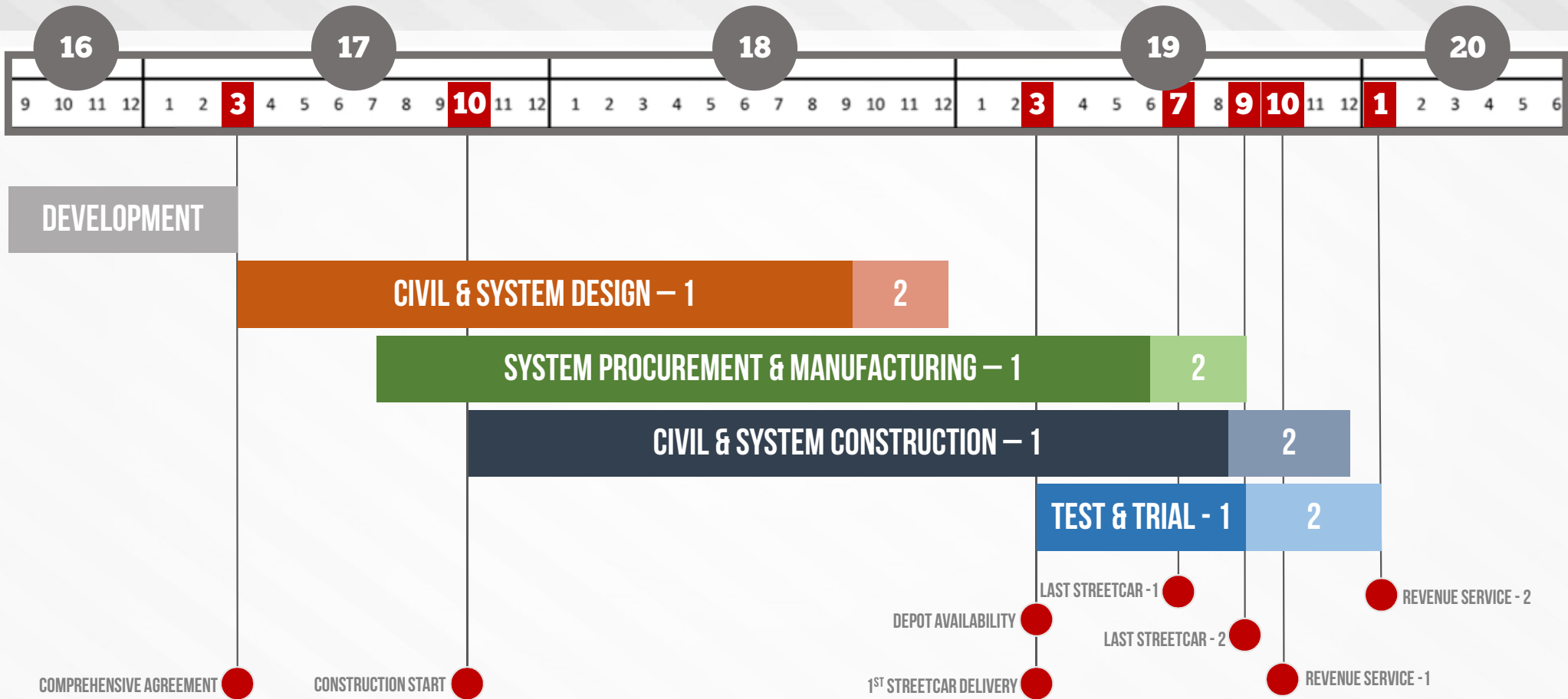
1  Sidewalk Work (40 Days) **2**  Track Work (80 Days)

CONSTRUCTION – PROPOSED WORK BLOCKS



1  Sidewalk Work (40 Days) **2**  Track Work (80 Days)

CONSTRUCTION SUMMARY SCHEDULE





SAFETY





**Safe
Efficient
High Quality
Minimal Impact
Clear Communication**

OPERATIONS & MAINTENANCE



OPERATING APPROACH
MOMENTS OF TRUTH
CUSTOMER SAFETY & COMFORT

MOMENTS OF TRUTH

OUR PEOPLE

- Driving people, not Streetcars
- Recruit for attitude, train for skills
- Don't walk by, take responsibility
- Zero harm
- Event – last mile management
- Chaperone program
- Adopt a stop
- Meet the manager

CUSTOMERS

CUSTOMER SATISFACTION/VALUE



INFRASTRUCTURE AND SYSTEMS

- Contain 7.5–10 minute headways
- Highly reliable assets
- ADA-compliant Streetcars, Stops
- Consistent journey time
- Customer-focused design
- Dynamic Safety Corridor
- Every second counts

16.012.006a

1 Journey Stimulus	2 More Choice	3 Seek information on and consider options	4 Travel to stops	5 Wait on stops	6 Board Streetcars	7 Journey	8 Alight Streetcars	9 Travel from stops	10 Feedback
--------------------------	---------------------	---	-------------------------	-----------------------	--------------------------	--------------	---------------------------	------------------------------	----------------

CUSTOMER SERVICE





DUBAI TRAM CONTROL ROOM

PLANNED & UNPLANNED EVENTS

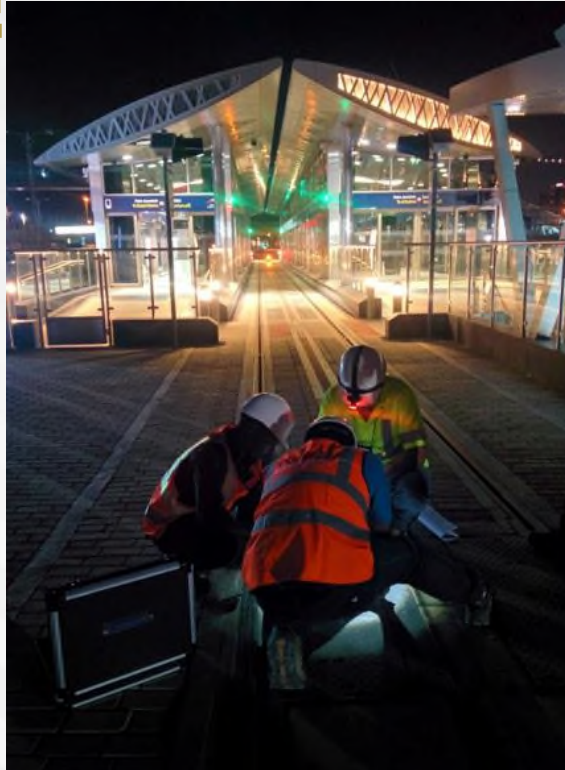
Planned Event - London Olympics 2012



Unplanned Event - Dubai 2015



MAINTENANCE



Design & Build

Test & Trial

Revenue Service

MAINTENANCE – ASSET MANAGEMENT

Maintenance
Management
System

Preventative Maintenance

Corrective Maintenance Records

Configuration & Modification Management

Overhauls & Renewals Activities

Obsolescence Management

Inventory Management

FINANCE



FINANCING APPROACH
FINANCING METHODOLOGY
INTERIM AGREEMENT

INFRARED EXPERIENCE

25+

YEAR TRACK RECORD

\$9bn

EQUITY MANAGED

15

FUNDS

120

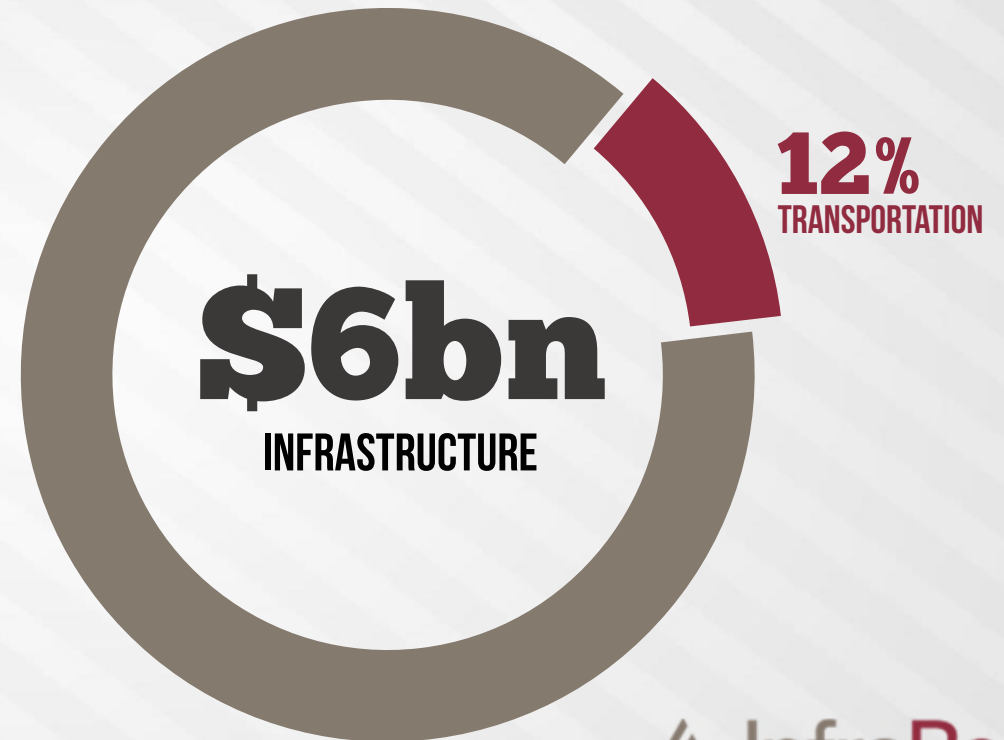
EMPLOYEES

300

TRANSACTIONS

175+

MANAGED ASSETS



Netherlands



Texas



Ohio



SOURCES OF FUNDING



PUBLIC SUBSIDY



SENIOR DEBT



EQUITY

OPTIMIZING THE FINANCE SOLUTION

Timing of **Equity Contribution**

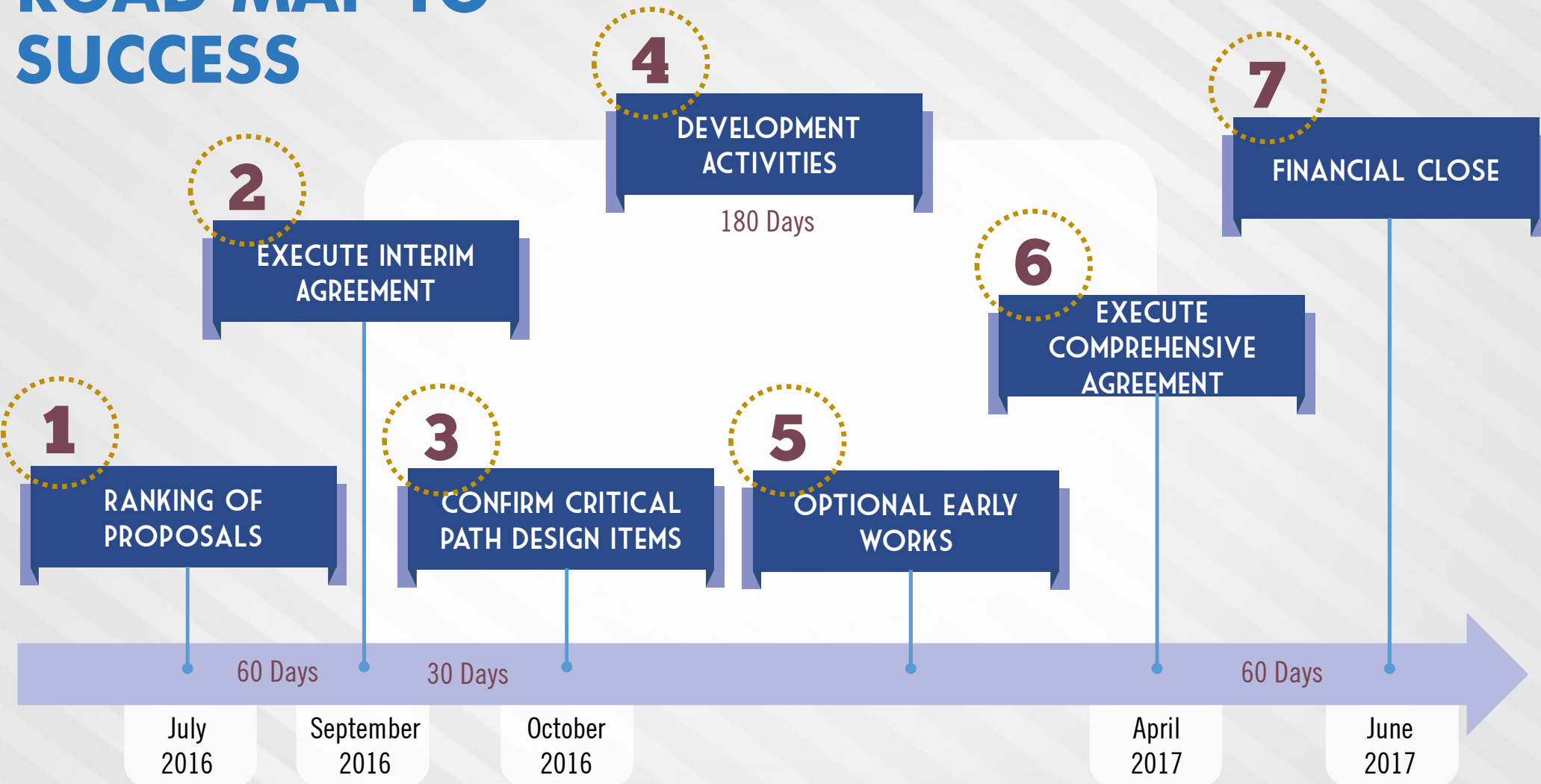
Senior Debt Amortization

Lifecycle Profile

Monetize **Advertising** Revenue

Delivery of **Additional Streetcars**

ROAD MAP TO SUCCESS





VISION

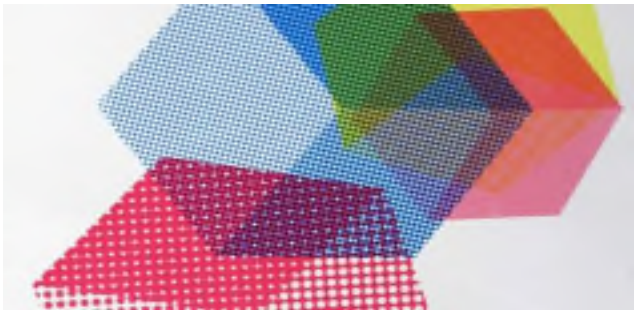


THEME 1 | NEON

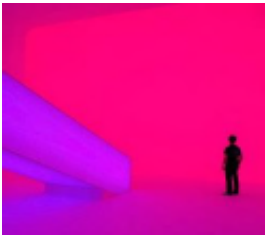
Inspired by Miami Beach Art Deco candy pastel palette. A combination of gradients effects and graphic lines grid, for a magic city linking business, leisure and culture.



MAGICCITY
COLORS
MOMENTUM
SUGARYPASTELS
TROPICAL



GRAPHICLINESRHYTHM
DESIGNGRID



HAPPYANDSUNNY
SUPERPOSITION
FRESHGRADIENT
EFFECTS



MIAMI BEACH

STREETCAR

EXTERIOR DESIGN

GREATER MIAMI TRAMLINK PARTNERS
ALSTOM     

THEME 1 | NEON



MIAMI BEACH

STREETCAR

EXTERIOR DESIGN

GREATER MIAMI TRAMLINK PARTNERS
ALSTOM   JACOBS serco 

THEME 1 | NEON



MIAMI BEACH

STREETCAR

EXTERIOR DESIGN

GREATER MIAMI TRAMLINK PARTNERS
ALSTOM     

THEME 1 | NEON



THEME 1 | NEON



THEME 1 | NEON



THEME 3 | CONTEMPORARY ART

Miami's South Beach embraces a rich artistic culture.
Imagine a dialogue between transportation and art
within the urban space.
A journey becomes a sensory experience.
Could the journey become an urban artistic encounter?
Envision the streetcar and the environment
it travels through as ever-changing
players on an artistic journey.
In the following presentation, we will show how
the streetcar can create interaction between
the riders and their city,
a window into a unique urban perspective.



LeParc



Vasarely



Soto



Agam



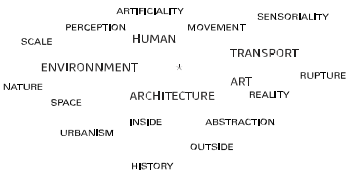
Sten&Lex

URBAN ART



JR

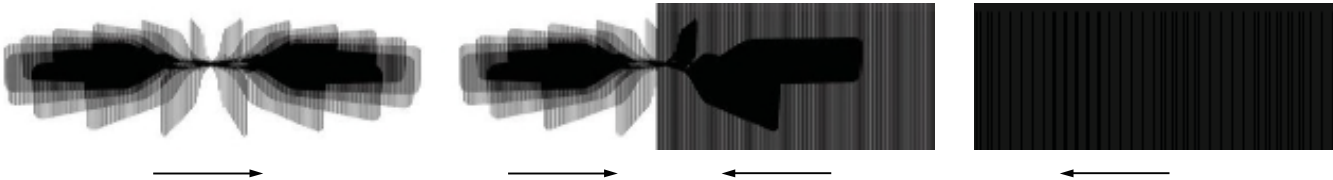
INTERACTION



Zoerism & Velvet

ILLUSION OF MOVEMENT

We are going to develop reflexions around the illusion of movement. Here is the main process we will use in order to use the streetcar as an interaction sphere.



With a static image and a movable grating, we can create simple animations.

INTRODUCTION : ILLUSION OF MOVEMENT

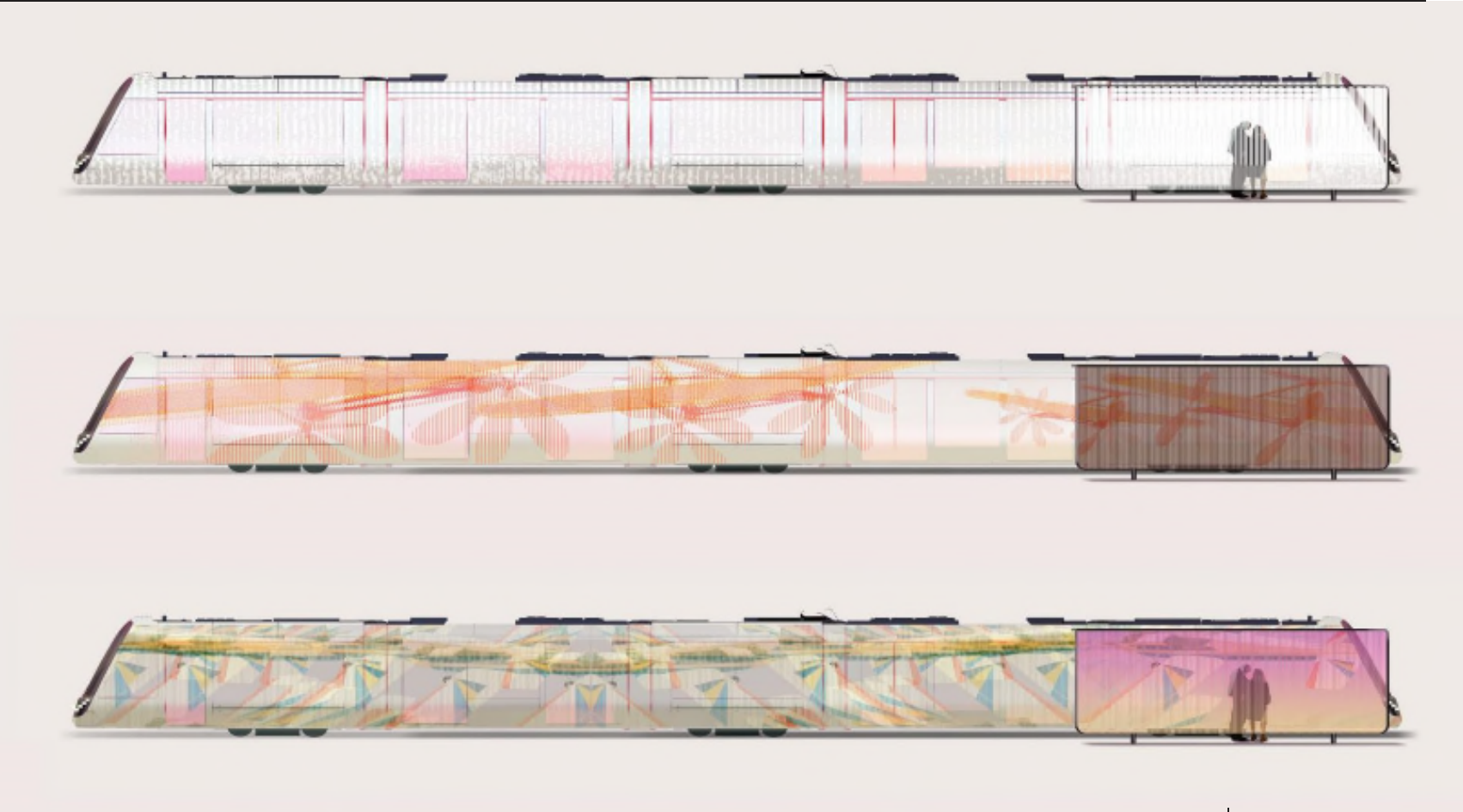
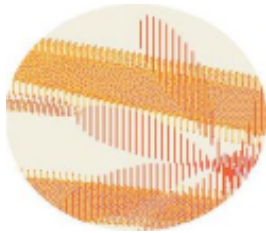
MIAMI BEACH _ DESIGN THEME 3 CONTEMPORARY ART

THEME 3 | CONTEMPORARY ART

The patterns are resulting a combination of several sequences of a movement
These pieces of art are animated while we watch them in movement, through a matrix grid.



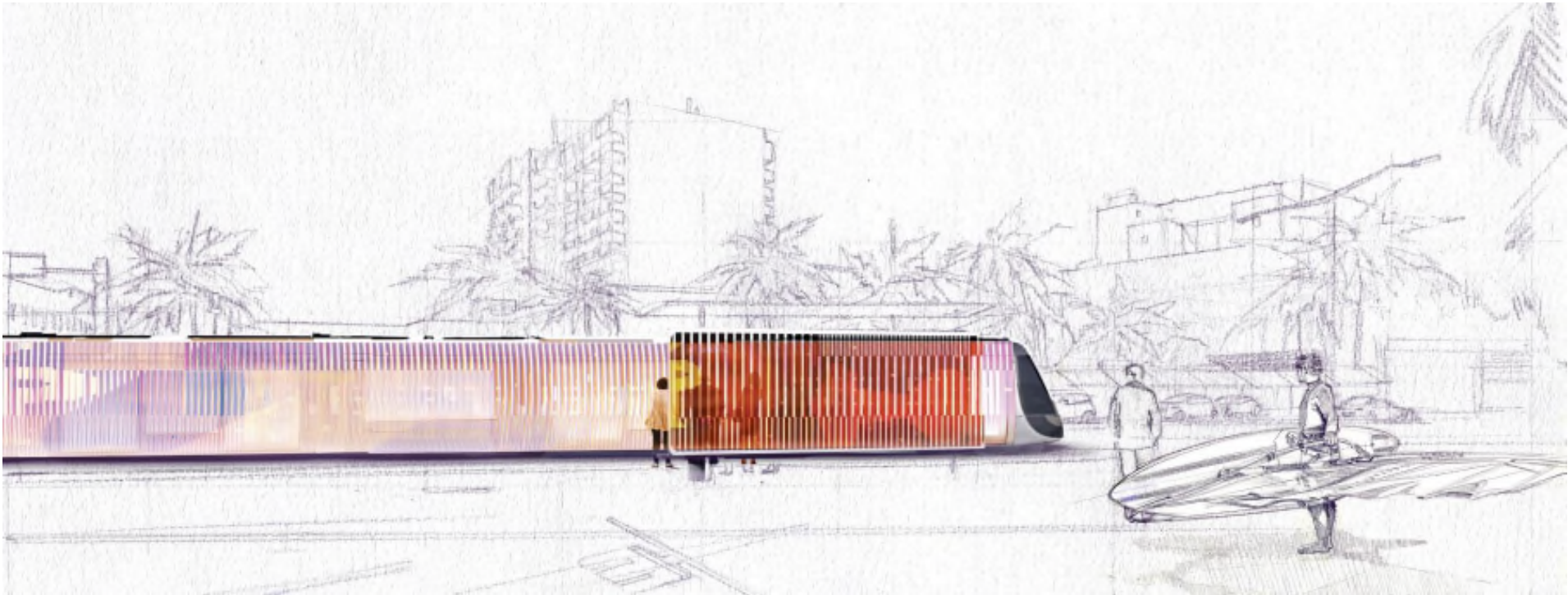
CLOSE UPS



PACKAGES POSSIBILITIES

THEME 3 | CONTEMPORARY ART

AT THE STATION



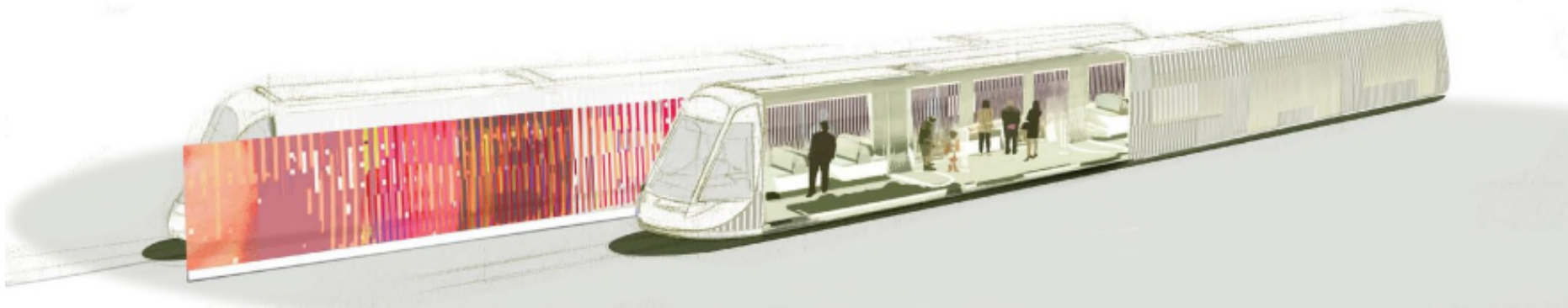
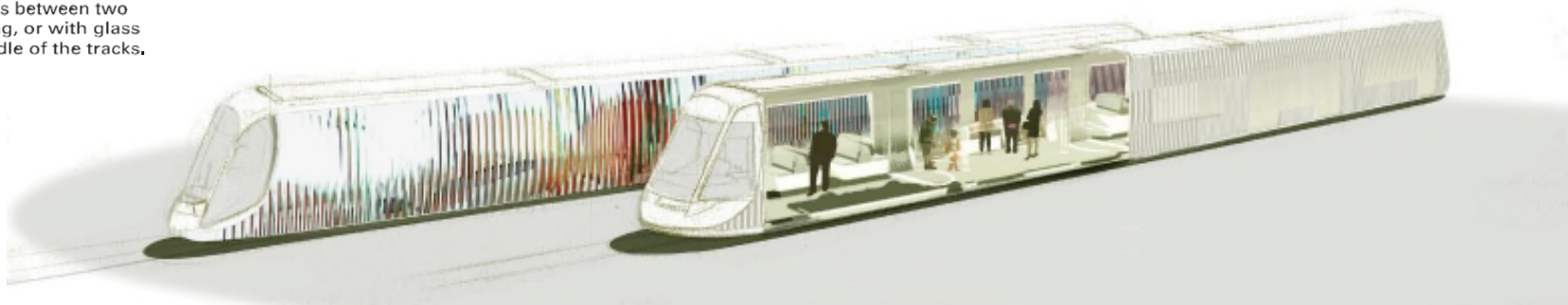
INTERACTION BETWEEN THE STATION AND THE STREETCAR

MIAMI BEACH _ DESIGN THEME 3 CONTEMPORARY ART

THEME 3 | CONTEMPORARY ART

CROSSINGS

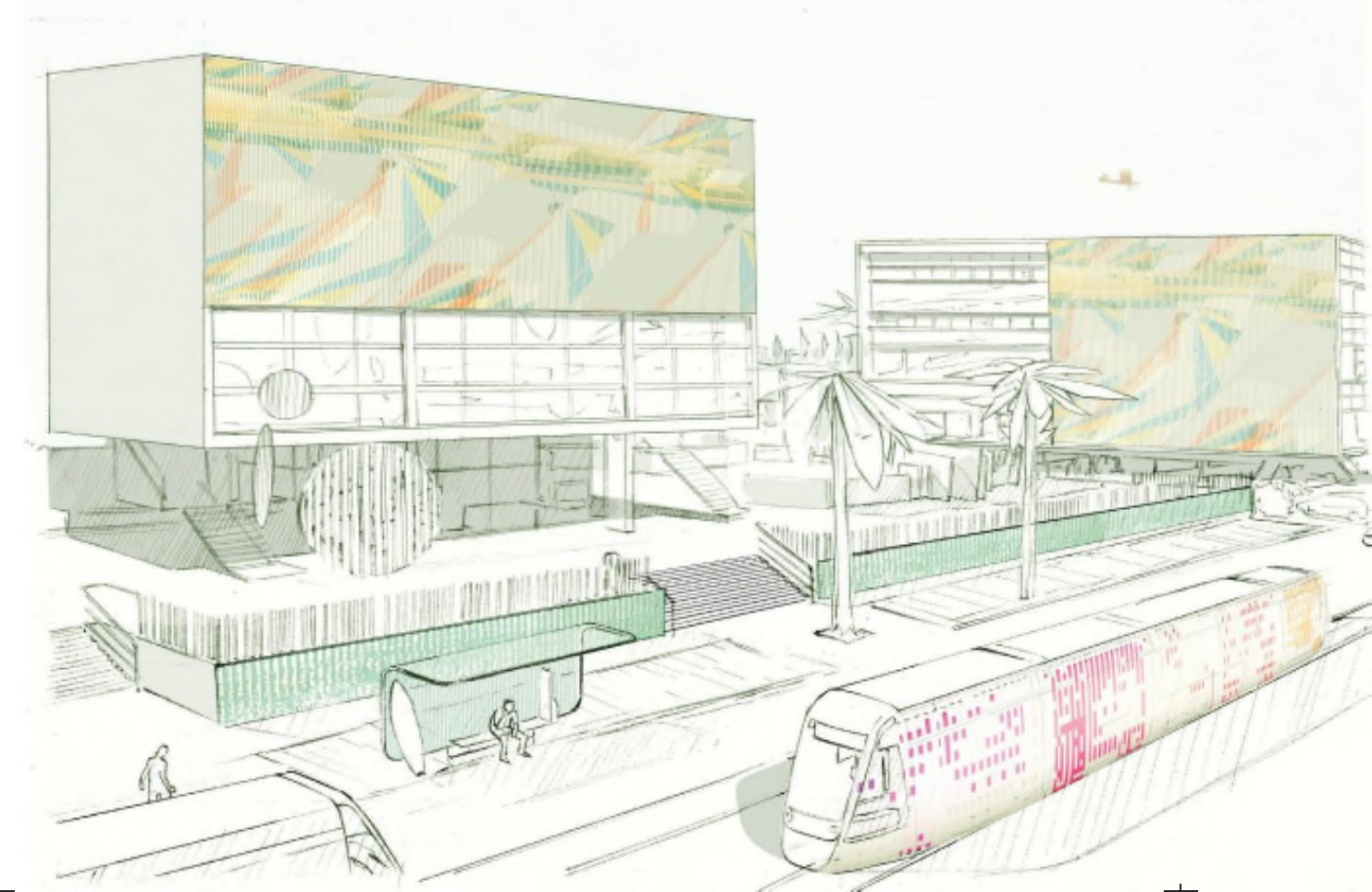
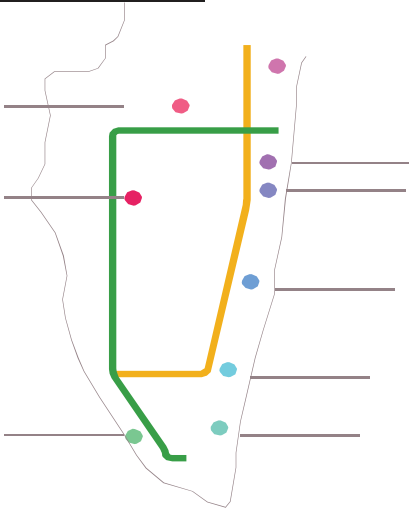
We can create animations between two streetcars crossing, or with glass separations in the middle of the tracks.



THEME 3 | CONTEMPORARY ART

The streetcar can be considered as a unique way to discover a course of art creations in the city. In fact the streetcar becomes the link between the art and the traveler, and create a dialogue with paintings, prints, sculptures, architectures, near or far from the streetcar. The streetcar is a revealer and a piece of art itself.

MIAMI BEACH URBAN ARTTOUR



THE WHOLE CITY BECOMES AN ANIMATED PIECE OF ART

MIAMI BEACH _ DESIGNTHEME 3 CONTEMPORARY ART

THEME 2 | STREAMLINE

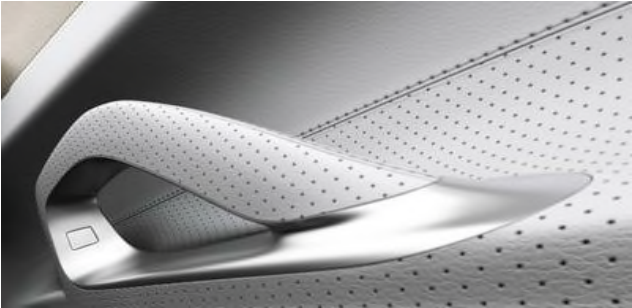
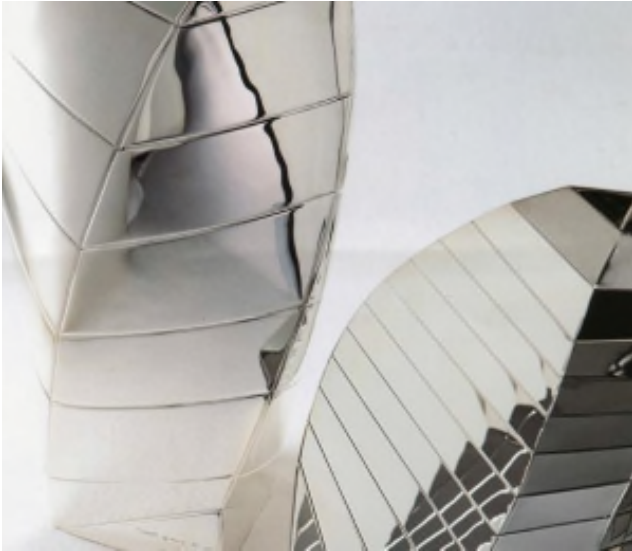
A beautiful palette of grey tones with contrasting and luminous soft yellow.
Dynamic, swift, smooth and sophisticated.



POLISHED SHAPE
PANORAMIC
SPORT
TECH



STREAMLINED
FLUIDITY
DYNAMIC
PURITY



TRANSPARENCY
USER FRIENDLY
TECHNOLOGY
GREEN MOBILITY



THEME 2 | STREAMLINE



MIAMI BEACH

STREETCAR

EXTERIORDSIGN

GREATER MIAMI TRAMLINK PARTNERS
ALSTOM     

THEME 2 | STREAMLINE



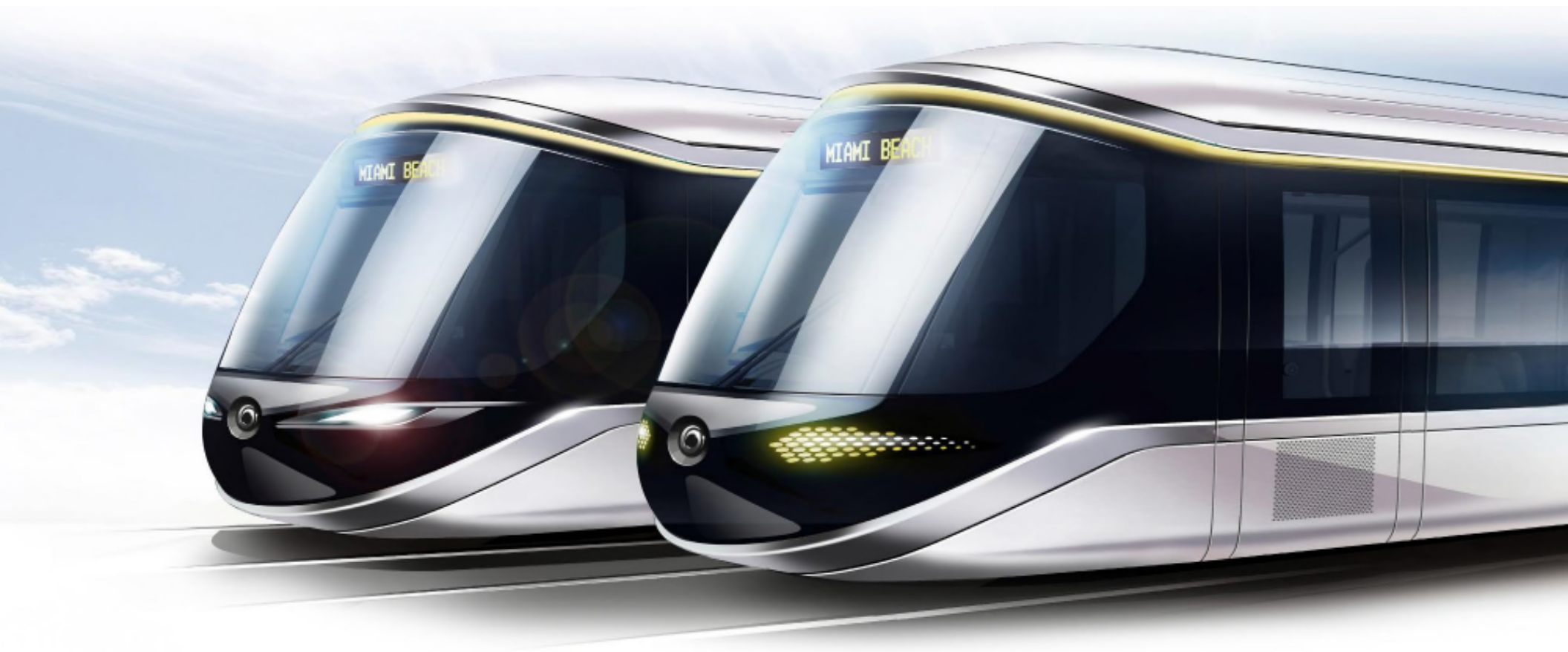
MIAMI BEACH

STREETCAR

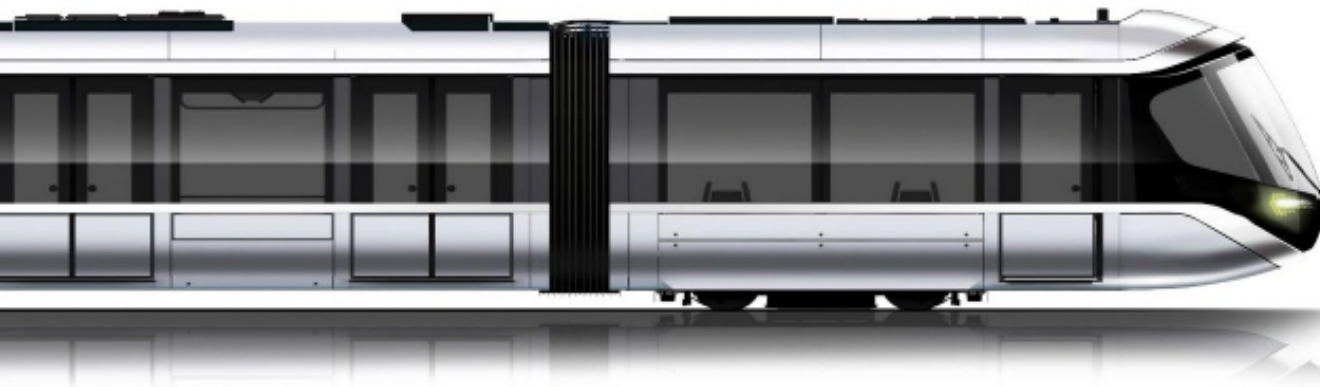
EXTERIOR DESIGN

GREATER MIAMI TRAMLINK PARTNERS
ALSTOM     

THEME 2 | STREAMLINE



THEME 2 | STREAMLINE



THEME 2 | STREAMLINE



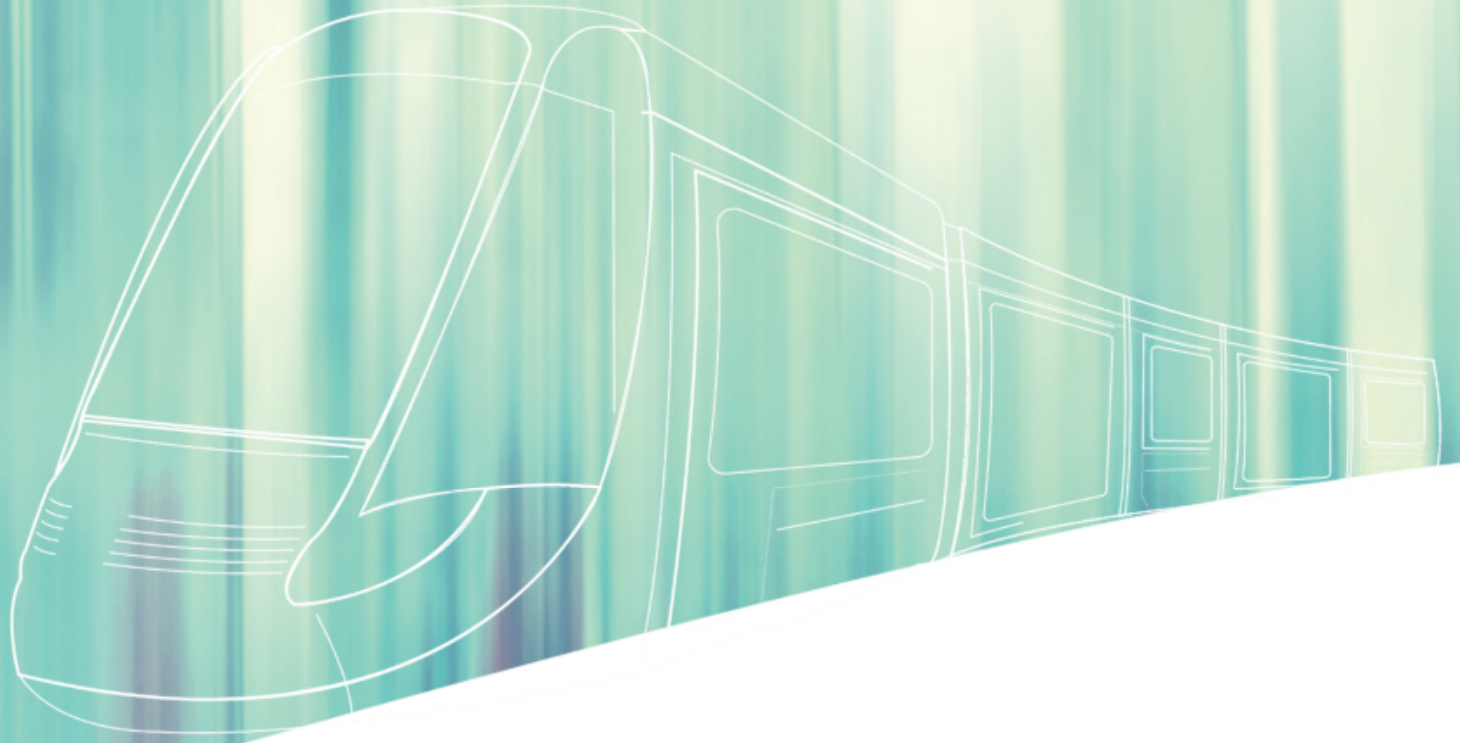
THEME 2 | STREAMLINE



THEME 2 | STREAMLINE



READY TO ROLL



Miami Beach Trans Master Plan
Passenger Comfort
Aesthetic Sensitivity
Transit & Municipal Identity
Connect to Area Attractions

Sea Level Rise and Flooding
Interoperability
GPS Technology
Low Floors / Disabled Accessible
Modern, Innovative Technology

Personal Experience & Team Synergy
Operator-led
P3 Financing Expertise
Rail Systems in Urban Setting
Fully Catenary-less System



COMMUNITY



TECHNOLOGY



EXPERIENCE

EVALUATION CRITERIA



COMPLIANCE



FINANCIAL CAPABILITY



EXPERIENCE



METHODOLOGY

“JUST GET IT DONE!”

- Mayor Philip Levine